

A revision of the *Scopaeus sulcicollis* species group, with description of a new species from North-East Anatolia (Coleoptera, Staphylinidae, Paederinae)

Johannes FRISCH

Institut für Allgemeine und Spezielle Zoologie, Justus-Liebig-Universität Gießen,
Stephanstr. 24, D-35390 Gießen, FRG.

A revision of the *Scopaeus sulcicollis* species group, with description of a new species from North-East Anatolia (Coleoptera, Staphylinidae, Paederinae). - The West Palaearctic *Scopaeus sulcicollis* species group is defined by external morphological and genital features. It comprises *S. ampliatus* Binaghi (North-East Italy, Corsica, Sardinia), *S. argonauta* Gusarov (Caucasus), *S. ponticus* sp. n. (North-East Anatolia), *S. rubidus* Mulsant & Rey (South-West Europe) and *S. sulcicollis* Stephens (West-, Central-, South Europe), which are illustrated and, except *S. argonauta* and *S. sulcicollis*, described using external morphological, genital and meristic characters. A lectotype is designated for *S. rubidus*.

Key-words: Staphylinidae - Paederinae - *Scopaeus sulcicollis* group - West Palaearctic Region - taxonomy.

INTRODUCTION

Within *Scopaeus* (Staphylinidae, Paederinae), both earlier and more recent authors (e. g. BINAGHI 1935; COIFFAIT 1960, 1968, 1984; FAUVEL 1872; HORION 1965; LOHSE 1964; MULSANT & REY 1854, 1855; REITTER 1909) have frequently employed subgenera which, however, are poorly founded and do not represent monophyletic groups (FRISCH 1996). It was suggested in subsequent revisionary publications on West Palaearctic *Scopaeus* (e. g. FRISCH 1997, 1998) that these subgenera be replaced by informal groups of related species. *Scopaeus sulcicollis* Stephens and *S. argonauta* Gusarov were referred to the *S. sulcicollis* group (FRISCH 1997) but the complete group has not been revised until now.

BINAGHI (1935) noted the close relationship of *Scopaeus ampliatus* Binaghi, *S. rubidus* Mulsant & Rey and *S. sulcicollis* Stephens, 1832 (= *S. cognatus* Mulsant & Rey sensu BINAGHI 1935), but used inappropriate characters (parameres lacking, apical lobes being fused or nearly fused at apex) to define the species group. A lack of parameres (lateral lobes sensu FRISCH 1994) is a character of several groups of related species, and the apical lobes of the relevant species are, in fact, absolutely separate. Recently, GUSAROV (1992) described *S. argonauta* from the Caucasus and compared it

with *S. sulcicollis*. When designating a lectotype for the latter, FRISCH (1997) referred both species to the *S. sulcicollis* group, referring to aedeagal characters as the shape of the apical lobes and the apically undivided, ventrally bent dorsal lobe, and to the abdominal sternite 8 having distinct, apico-lateral impressions, which are divided by an elevated middle field.

According to the present concept, the *Scopaeus sulcicollis* group comprises five species in the West Palaearctic realm: *S. ampliatus* (North-West Italy, Corsica, Sardinia), *S. argonauta* (Caucasus), *S. ponticus* sp. n. (North-East Anatolia), *S. rubidus* (South-West Europe) and *S. sulcicollis* (West-, Central-, South Europe). These species agree in the discernibly enlarged tempora, in the more or less dilated mesotibiae, in the laterotergites 9 lacking a distinct dorsal tooth, in the aedeagus lacking lateral lobes and in the inner ventral margins of the apical lobes each bearing a row of fine setae. As the first features occur in several groups of related species, only the inner rows of setae of the apical lobes may be an apomorphic feature of the *S. sulcicollis* group. The species, except *S. ampliatus*, share furthermore two longitudinal, lateral impressions on abdominal sternit 8 divided by an elevated middle field. As these characters of abdominal sternit 8 occur in several species groups but lack in *S. ampliatus*, they are not usable to define the *S. sulcicollis* group. Additionally, the aedeagi of *S. ampliatus*, *S. rubidus* and *S. ponticus* sp. n. share somewhat asymmetrical dorsal lobes and apical lobes.

The present review gives a more accurate definition of the *S. sulcicollis* group. It presents redescriptions and the distribution patterns of *S. ampliatus* Binaghi and *S. rubidus* Mulsant & Rey and additional notes on *S. argonauta*, along with illustrations of all species included. *Scopaeus argonauta* and *S. sulcicollis* were redescribed in FRISCH (1997). Finally, *Scopaeus ponticus* sp. n. from North-East Anatolia is included in the *S. sulcicollis* group.

MATERIAL AND METHODS

The terminology of the aedeagal features is used as in FRISCH (1994). The spermatheca and the genital sclerites are named as in FRISCH (1996) and UHLIG (1989). Abdominal sclerites are counted from the first morphological segment.

Specimens were measured using a binocular microscope with an eye-piece linear micrometer. Measurements and ratios are based on ten specimens of both sexes, which are including maximum variation range in size and form, and are defined as follows: total length = interval from the apical margin of the mandibles to the end of the abdomen; forebody length = interval from the apical margin of the mandibles to the posterior margin of the elytra at suture; length of head = interval from the apical margin of the clypeus to the posterior margin; HLW = head length : head width; PLW = pronotal length : pronotal width; HPW = width of head : pronotal width; HPL = length of head : pronotal length; PSL = pronotal length : elytral sutural length (excluding scutellum); PLL = pronotal length : elytral lateral length; ELW = elytral lateral length : elytral width; ET = eye length : temporal length (both measured laterally); MT = mesotibial length : mesotibial width; A = length (measured without the basal and distal

tapering): width of the antennal segments 1-11; T = length : width of the central area (between sclerite margins) of the tergite 10; V = length : width of the central area of the female valve.

Detailed data are given only for the type specimens. The synonymy of the species presents only primary references. The study material is deposited in the following institutions and private collections: BMNH = The Natural History Museum, London; DEIC = Deutsches Entomologisches Institut, Eberswalde; FCNB = Frey Collection, Naturhistorisches Museum, Basel; HHNM = Hungarian Natural History Museum, Budapest; ISNB = Institut Royal des Sciences Naturelles de Belgique, Brussels; JFCG = J. Frisch Private Collection, Gießen; MCSN = Museo Civico di Storia Naturale "Giacomo Doria", Genova; MHNG = Muséum d'histoire naturelle, Genève; MHNL = Musée Guimet d'histoire naturelle, Lyon; MNHN = Muséum National d'Histoire Naturelle, Paris; NHMW = Naturhistorisches Museum, Wien; SMTD = Staatliches Museum für Tierkunde, Dresden; TLMF = Tiroler Landesmuseum Ferdinandeum, Innsbruck; VACH = V. Assing Private Collection, Hannover; VGCP = V. Gusakov Private Collection, St. Petersburg; ZMAL = Zoological Museum, Academy of Sciences, St. Petersburg; ZMHB = Museum für Naturkunde, Berlin.

TAXONOMY

Scopaeus argonauta Gusarov

Figs 4-6, 17, 22, 25, 29, 34

Scopaeus (s. str.) *argonauta* Gusarov, 1992: 781. Holotype ♂, Georgia, Adzharia, Kintrishkiy Nature Reserve, 500 m, 30.07.1990, Gusarov (ZMAL); examined.

Scopaeus argonauta; FRISCH 1997: 537.

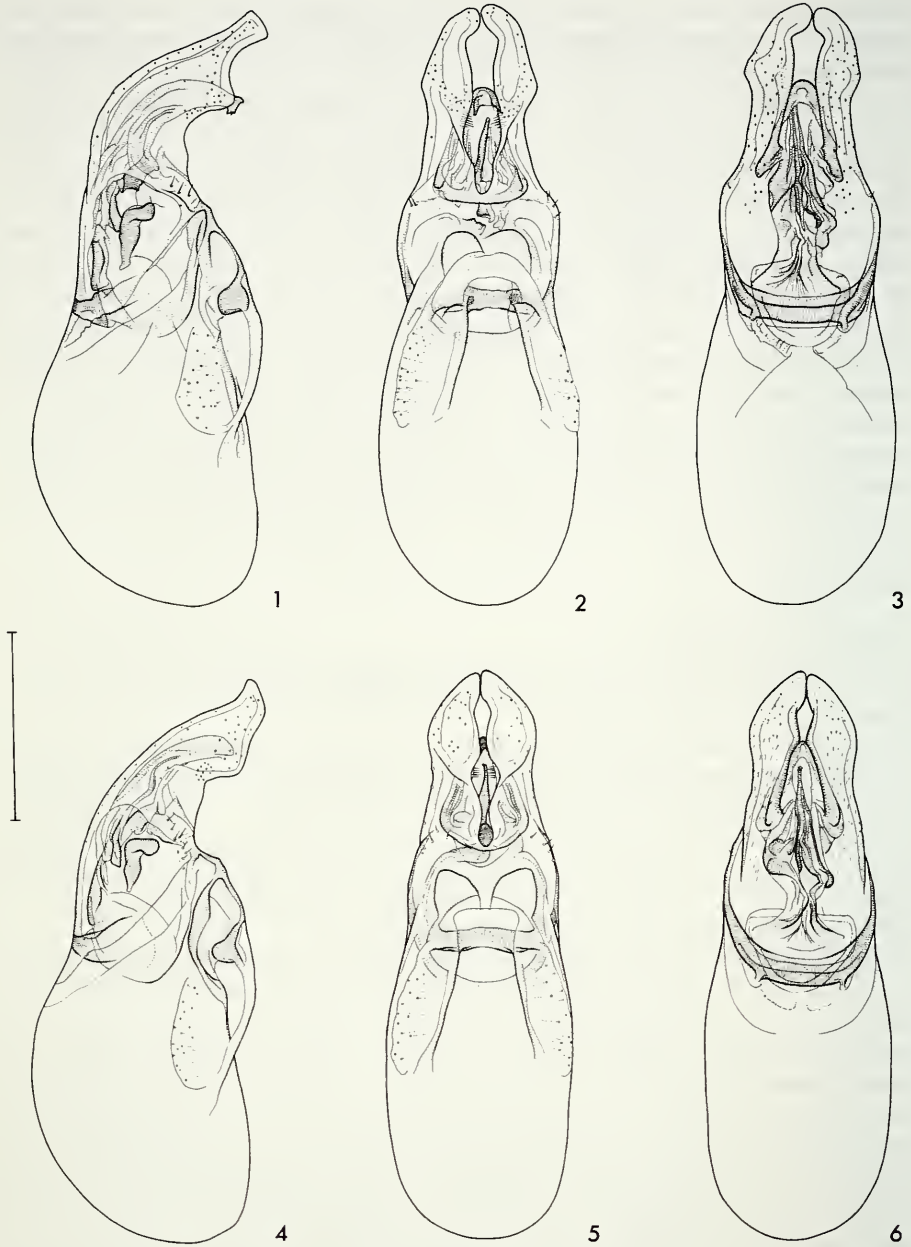
Material examined. Georgia: holotype ♂, Adzarskaja, Kintrishkiy Nature Reserve, 500 m, 30.07.1990, Gusarov (ZMAL); paratypes 1 ♂, 1 ♀, same data as holotype (VGCP, ZMAL); paratype ♀, Adzarskaja, Pirveli Maisi, Agdra, 05.08.1990, Gusarov (VGCP); paratypes 2 ♀, Abchazskaja, Ganakhleba, 26.07.1990, Gusarov (VGCP); paratype ♀, Abchazskaja, Gumistinskiy Nature Reserve, Tsumuri, Ashamgvava ridge, 900 - 1100 m, 03.07.1981, Gusarov (VGCP); paratype ♂, Abchazskaja, Gumistinskiy Nature Reserve, Tsumuri, 420 m, 20.07.1990, Gusarov (VGCP). Russia: paratype ♂, Krasnodar Kraj, Lasarevskaja, Aul Kirowa, 29.09.1986, Kirejtshuk (ZMAL).

Comments. The similar shape of the aedeagus and the abdominal sternite 8 of males suggests that *Scopaeus argonauta* (figs 4-6, 17) and *S. sulcicollis* (figs 1-3, 16) are closely related (FRISCH 1997, GUSAROV 1992). Meanwhile, the holotype ♂ and paratypes (3 ♂, 5 ♀), which were not traceable then, have been examined, and *S. argonauta* turned out to be a species of quite variable elytral length and not distinguished constantly from *S. sulcicollis* by the longer elytra. Specimens of *S. argonauta* with shorter elytra laterally exceeding the pronotal length by just about a seventh (PLL 0,86) cannot be distinguished from *S. sulcicollis*. *Scopaeus argonauta* is characterized furthermore by a rather variable shape of the head, which has the tempora rather parallel or notably widened.

Scopaeus ponticus sp. n.

Figs 7-9, 18, 23, 26, 30, 35

Material examined. Holotype ♂, Turkey: Trabzon, Arakli, 100 m, 24.05.1997, collected on the narrow bank of a small stream with damp, fine gravel and sand, Frisch (MHNG). Paratypes. 7 ♀, same data as holotype (JFCG, MHNG).



FIGS 1-6

Scopaeus argonauta, ♂, Caucasus: aedeagus in 1) lateral, 2) ventral, 3) dorsal view. *Scopaeus sulcicollis*, ♂ lectotype: aedeagus in 4) lateral, 5) ventral, 6) dorsal view. Scale bar = 0.1 mm.

Description. Length 3.2-3.9 mm; forebody 1.6-1.8 mm. Dark coloured species. Forebody brown, pronotum slightly lighter brown, elytra blackish without distinct sutural or distal lightnings. Abdomen black, segments 8-10 dark brown. Appendages unicolorously light brown. Punctuation distinct, relatively coarse on elytra, but rather fine on pronotum, reticulation rather obsolete, forebody therefore somewhat shining. Head trapezoid with notably widened tempora, distinct hind angles and with a rather concave posterior margin, about a tenth longer than wide and up to almost a fifth wider than pronotum. Eyes rather small, distinctly less than half as long as tempora. Flightless species. Elytra rather short and slender, laterally as long as pronotum or exceeding pronotal length just by about a tenth, at suture up to a fifth shorter than pronotum. Membranous wings strongly reduced, not exceeding double the length of the elytra. Protrassomers 1-4 in both sexes twice as wide as long. Mesotibia moderately dilated, about five times as long as wide. Antennae rather slender, distal antennomeres almost quadrate. Laterotergite 9 (fig. 23) without a distinct dorsal tooth but slightly dilated apico-dorsally. Male sternite 8 (fig. 18) with a triangular emargination in the apical third and two medio-lateral, lighter coloured, narrow, longitudinal impressions which bear no setae and are divided by a broad, elevated middle field with lateral margins distinct from the lateral impressions. Aedeagus (figs 7-9) with slightly asymmetrical apical lobes and dorsal lobe, with apices somewhat bent to the right in dorsal view. Apical lobes about half as long as phallobase and broadangled bent ventrally in the distal half, their ventral margins in the distal half each extended into a longer, acute distal and a shorter, rounded proximal lobe, which are divided by a semicircular emargination. Proximal lobes bent laterally in ventral view. Outer margins of the apical lobes in dorsal view evenly narrowed in the basal half but somewhat rounded and dilated in the distal half, their inner margins in ventral view each bearing a row of about six short setae. Dorsal lobe conspicuously long and slender, broadangled bent ventrally in the distal half just as the apical lobes, its acute apex strongly projects from the apex of the apical lobes and is extended ventrally to a strong, median tooth. Lateral lobes reduced to lateral groups of few, short setae. Spermatheca (fig. 35) with members slightly bent in lateral view. Chamber strongly triangular, process rather slender.

Ratios. HLW 1.06-1.13; PLW 1.15-1.23; HPW 1.1-1.17; HPL 1.0-1.06; PSL 1.07-1.21; PLL 0.87-0.99; ELW 1.16-1.23; ET 0.39-0.48; MT 4.9-5.6; A 2.2, 1.3, 1.3, 1.1, 1.1, 1.1, 1.0, 1.0, 1.0, 0.9, 1.7; T 1.9; V (♀) 4.4.

Comments. Externally, *S. ponticus* sp. n. is difficult to distinguish from *S. sulcicollis* and *S. argonauta*, but may be separated from *S. argonauta* by the reduced metathoracic wings. Additionally, *S. ponticus* differs from the specimens examined of *S. argonauta*, which have elytra exceeding the pronotal length by about a fifth, by their discernibly shorter elytra (see FRISCH 1997). However, bearing in mind the meagre material examined, the length of the membranous wings may be variable in *S. ponticus*, and the length of the elytra may be as variable as in *S. sulcicollis* and *S. argonauta*. Judging from the aedeagal characters, *S. ponticus* sp. n. is isolated within the *S. sulcicollis* group.

Scopaeus rubidus Mulsant & Rey

Figs 10-12, 19, 24, 27, 31, 36

Scopaeus rubidus Mulsant & Rey, 1854: 171; 1855: 59. Lectotype ♂, France, Provence (MHNL); here designated (examined).

Scopaeus (Polyodontus) rubidus; FAUVEL 1872: 313.

Scopaeus (Heteroscopaeus) rubidus; COIFFAIT 1960: 285.

Scopaeus (Anomoscopaeus) rubidus; COIFFAIT 1968: 426.

Scopaeus subcylindricus Scriba, 1868: 156; synonymized with *S. rubidus* by FAUVEL 1871: 136.

Material examined (291 specimens). Danmark (MNHN). France: Lectotype ♂ and paralectotype 1♀ of *S. rubidus*, Provence (MHNL); paralectotypes 1♂, 3♀ of *S. rubidus*, Lyon (MHNL); Ain (NHMW); Allier (MNHN); Alpes de Haute-Provence (MNHN); Alpes Maritimes (MHNG, MNHN); Aube (ISNB); Aude (FCNB, NHMW, MNHN, SMTD); Bas-Rhin (MNHN); Bouches-du-Rhône (NHMW); Drôme (ISNB); Gironde (MNHN); Haute-Garonne (ISNB, MNHN); Hautes-Pyrénées (ISNB); Hérault (ISNB, NHMW, MNHN); Isère (MHNG, MNHN); Landes (MNHN); Loiret (NHMW, MNHN); Pyrénées-Atlantiques (ISNB); Rhône (DEIC, NHMW, MNHN); Savoie (ISNB); Var (ISNB, MNHN); Vaucluse (HNHM, MHNG, MNHN). Italy: Abruzzi (NHMW); Emilia-Romagna (JFCG, NHMW, TLMF); Lazio (DEIC, MHNG, NHMW, ZMHB); Liguria (NHMW); Piemonte (BMNH, DEIC, ISNB, MCSN, NHMW, MNHN, ZMHB); Sardinia (HNHM); Toscana (MCSN, SMTD). Spain: Andalusia (ISNB, MHNG, MNHN), Aragon (JFCG, MHNG, NHMW, VACH); Castilla-Leon (MHNG); Catalunya (MHNG); Madrid (MHNG). Switzerland: Genève (MHNG).

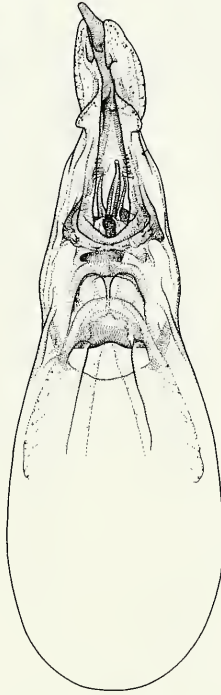
Description. Length 3.4-3.9 mm; forebody 1.8-2.0 mm. Light coloured species of a rather broad and convex habitus. Forebody unicolorously light reddish brown to orange, pronotum slightly lighter, abdomen brown to dark brown, segments 8-10 somewhat lighter brown. Appendages evenly light brown. Punctuation distinct, rather fine and spacious on pronotum, on elytra with separate punctures and not as granular as in related species. Reticulation omits completely, forebody therefore distinctly shining. Head trapezoid with tempora notably widened, hind angles distinct and with a straight or slightly concave posterior margin, as long as wide or just up to a tenth longer than wide and just about a tenth wider than the rather broad pronotum. Eyes rather large, about half as long as tempora. Elytra rather broad and convex, laterally exceeding pronotal length by about a fifth, at suture about as long as pronotum. Membranous wings entire. Protarsomeres 1-4 in both sexes twice as wide as long. Mesotibia remarkably dilated, distinctly less than five times as long as wide. Distal antennomeres discernibly transverse. Laterotergite 9 (fig. 24) having a very slight, apico-dorsal dilatation. Male sternite 8 (fig. 19) with a rather short triangular emargination in just the apical fifth and two lateral, lighter coloured, broad impressions lacking the fine basic setae but studded with only stronger setae, and divided by a broad, slightly elevated middle field, which bears laterally orientated setae. Aedeagus (figs 10-12) with lobes asymmetrical apically. Apical lobes slightly shorter than the phallobase, strongly

FIGS 7-12

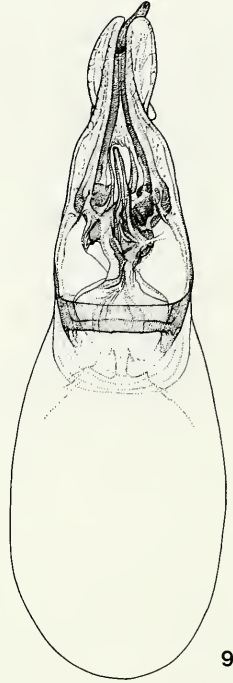
Scopaeus ponticus sp. n., ♂ holotype: aedeagus in 7) lateral, 8) ventral, 9) dorsal view. *Scopaeus rubidus*, ♂, France, Isère: aedeagus in 10) lateral, 11) ventral, 12) dorsal view. Scale bar = 0.1 mm.



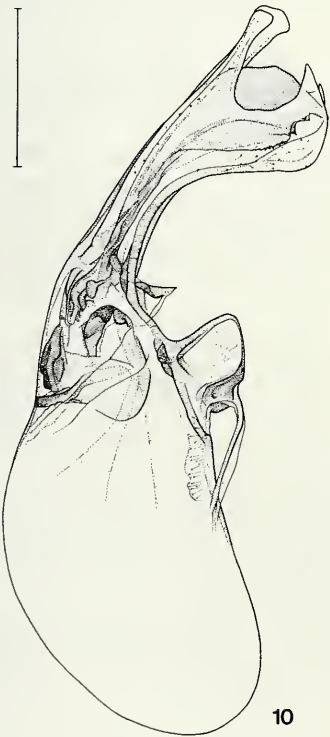
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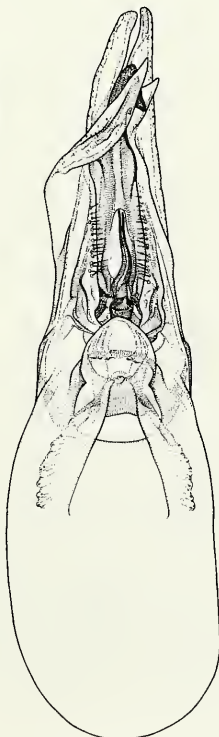
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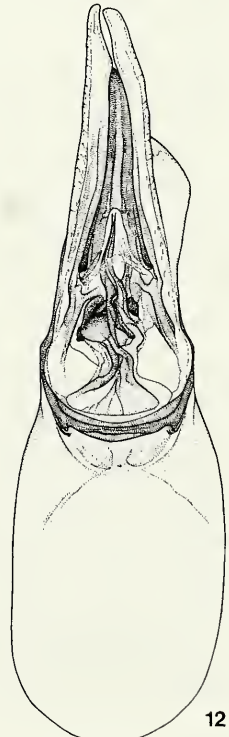
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11



12

dilated ventrally in the distal half, apically deeply emarginate, each forming a slender, apically truncate and somewhat dilated dorsal projection and a broad, acuminate, distally bent ventral projection, which are notably bent to the right in ventral view. Apical lobes slender and evenly narrowed with asymmetrical apices in dorsal view, ventral inner margins each bearing a long row of about 15-20 short setae. In dorsal view the right lobe is strongly dilated ventro-laterally in the basal half. Dorsal lobe slender at the base but evenly bent ventrally and strongly dilated toward the apex, not projecting from the distal and the ventral margins of the apical lobes but from the deep apical emargination, serrate apico-ventrally and extended apically into an acute spine, which is bent to the right in ventral view. A short, triangular spine projects ventrally from the basis of the apical lobes. Phallobase without lateral setae, but with a remarkably prominent, ventral extension. Spermatheca (fig. 36) with members rather straight in lateral view. Chamber strongly triangular, process slender.

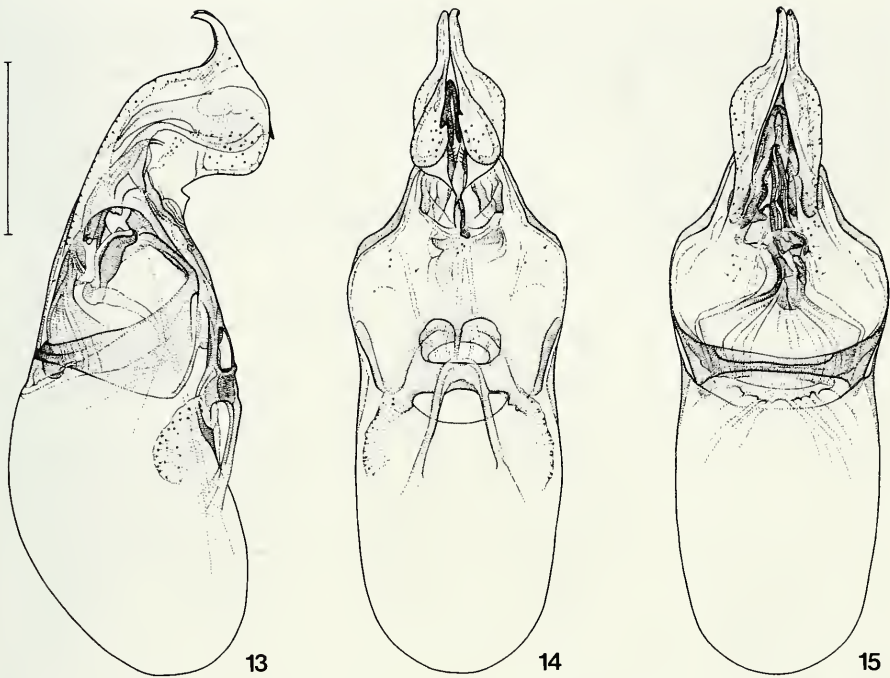
Ratios. HLW 1.04-1.11; PLW 1.15-1.25; HPW 1.06-1.13; HPL 0.95-1.01; PSL 0.95-1.07; PLL 0.77-0.85; ELW 1.16-1.28; ET 0.48-0.55; MT 4.2-4.7; A 2.5, 1.4, 1.5, 1.4, 1.3, 1.1, 0.9, 0.9, 0.8, 0.8, 1.6; T 2.0; V(♀) 5.2.

Distribution. *Scopaeus rubidus* is distributed in Western Europe and in the West Mediterranean region. The species was recorded repeatedly from the north of France (Maine-et-Loire: ABOT 1928; Champagne: COIFFAIT 1984; Aubé, Allier: FAUVEL 1872; Paris: SAINTE-CLAIRE DEVILLE 1907), and a specimen from Aube was examined. *Scopaeus rubidus* is confirmed throughout France and Spain southwards to Andalusia, but has not been recorded from the west of the Iberian Peninsula (Galicia, Portugal). Eastwards, the known range reaches from the southern Rhine valley (Strasbourg: COIFFAIT 1984) and Genève along the South Alps over the Apennines, where it is confirmed southwards to Lazio and Abruzzi. *Scopaeus rubidus* occurs on Sardinia but is unknown from Corsica, Sicily, the Balearic Islands and North Africa.

The occurrence of *S. rubidus* in Germany is doubtful. Ancient authors recorded the species from South Germany (BERNHAEUER & SCHUBERT 1910, GANGLBAUER 1895, HORION 1965, REITTER 1909, SCHEERPELTZ 1925) and South Bavaria (HORION 1965, KRAATZ 1858), but no specimens from Germany were available from relevant collections. Regarding the confirmed distribution pattern, the record from the upper Rhine valley (South Baden: HORION 1965) is plausible.

Records from Austria (REDTENBACHER 1874, SCHEERPELTZ in HORION 1965), the Czech Republic (BOHÁČ 1985, 1993; KLIMENT 1899), Hungary (LÁSZLO 1893), Russia (FAUVEL 1872) and the Ukraine (doubted by HORION 1965) are implausible and based obviously on misidentifications. Alleged specimens from Austria (Lower Austria, Burgenland, Styria, Carinthia), which were given by SCHEERPELTZ (in HORION 1965) and which should be in his collection (NHMW), are absent there. Ancient records from Bohemia and Moravia (KLIMENT 1899) have not been confirmed by recent specimens (BOHÁČ 1985) and have already been doubted by Horion (1965). Nevertheless, BOHÁČ (1993) mentions *S. rubidus* in the Checklist of Czechoslovak Insects.

The record of a supposed ♀ of *S. rubidus* from Crete (SCHEERPELTZ 1964) has to be declined as well.



FIGS 13-15

Scopaeus ampliatus, ♂, Italy, Elba: aedeagus in 13) lateral, 14) ventral, 15) dorsal view. Scale bar = 0.1 mm.

The record of *S. rubidus* from Devon in South England (FOWLER 1888), which was adopted by SAINTE-CLAIRE DEVILLE (1907), refers to *S. ryei* Wollaston (NEWBERRY 1914; EDMONDS 1931, 1932; ALLEN 1968), which was described from this British region.

A specimen labelled "Danemark, Venloo" (Jarrige collection, MNHN) is possibly mislabelled. The species has not been found in Denmark (M. Hansen, Zoological Museum, Copenhagen, pers. comm.), and its occurrence so far north appears implausible.

Comments. COIFFAIT (1968, 1984) falsely combined *S. rubidus* with *S. gracilis* Sperk and allied species in the ill-based subgenus *Anomoscopaeus*, which he defined only by asymmetrical apical lobes, an absolute unusable feature in *Scopaeus*, which occurs in several groups of related species. In fact, *S. rubidus* does not reveal any relationship to other species of "Anomoscopaeus".

Scopaeus subcylindricus was described from two ♀♀ (SCRIBA 1868) collected by Seidlitz. Their origine is not given in the description, and the specimens are not traceable in the Zoologische Staatssammlung, Munich, where the Seidlitz collection

was given (HORN *et al.* 1990). The Scriba collection was bought in 1898 by K. Neumann, Bad Homburg, who later published a list of the contained types (NEUMANN 1907), in which he omits *Scopaeus subcylindricus*. On the basis of the characters given by SCRIBA (1868) for *S. subcylindricus*, its synonymy with *S. rubidus* (FAUVEL 1871) appears plausible.

Scopaeus ampliatus Binaghi

Figs 13-15, 20, 21, 28, 32, 37

Scopaeus (Polyodontus) ampliatus Binaghi, 1935: 95. Holotype ♂, Italy, Liguria, Genova, 10.1920, Dodero (MCSN); examined.

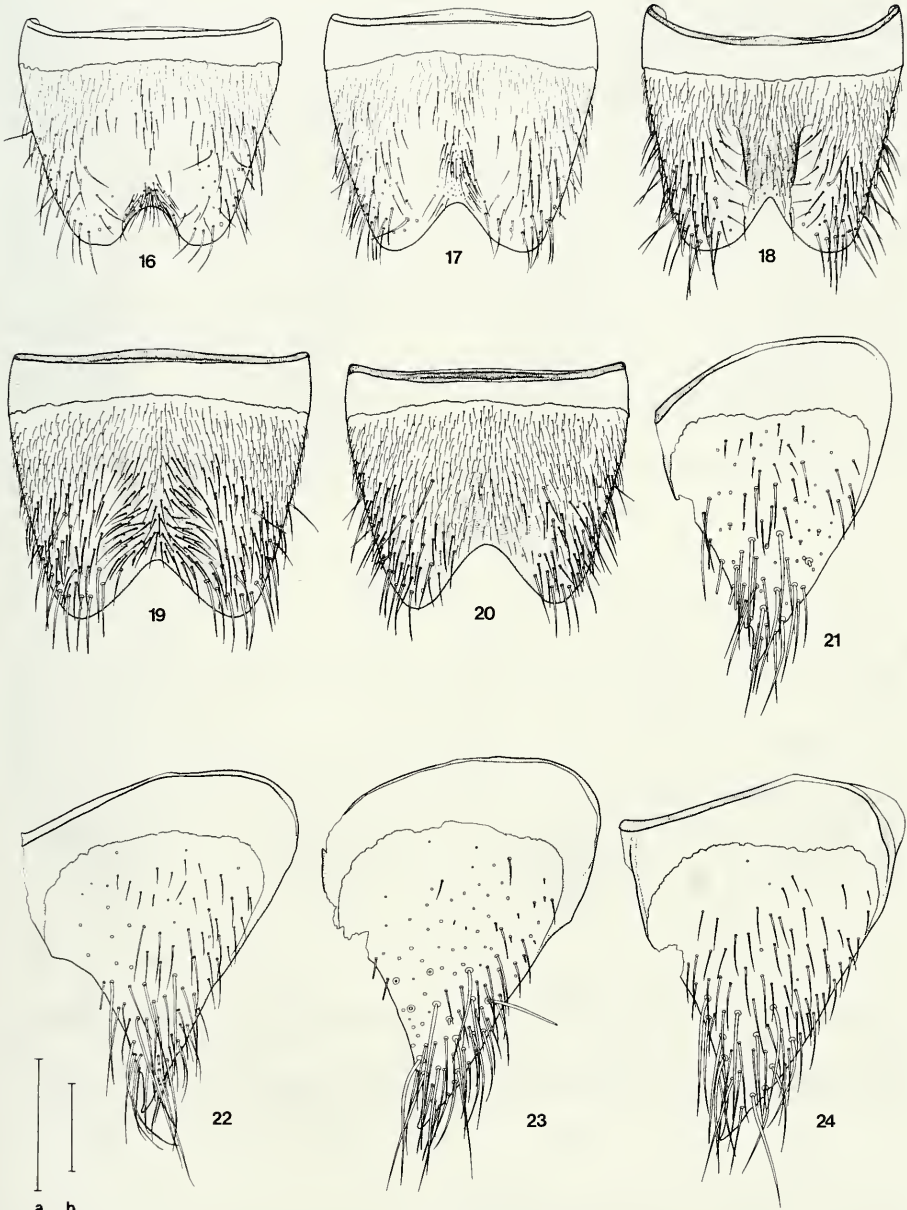
Scopaeus (Hyposcopaeus) ampliatus; COIFFAIT 1968: 419.

Material examined (15 specimens). France: Corsica (BMNH, JFCG, MNHN, NHMG). Italy: holotype ♂ and paratypes 1♂, 2♀, Liguria, Genova (MCSN); paratype ♂, Sardinia, Laconi (MCSN); Toscana (Elba) (NHMW).

Description. Length 3.0-3.2 mm; forebody 1.5-1.7 mm. Forebody unicolorously brown to dark brown, pronotum slightly lighter, abdomen blackish brown, segments 8-10 somewhat lighter brown. Appendages evenly light brown. Punctuation and reticulation as in *S. rubidus*, but elytra in some specimens with rather granular punctuation and weak reticulation. Head trapezoid with tempora notably widened, hind angles distinct and with a slightly to distinctly concave posterior margin, slightly or up to a tenth longer than wide and up to 0.17 times wider than pronotum. Eyes about half as long as tempora. Elytra relatively short, laterally about as long as pronotum or exceeding pronotal length by just almost a fifth, at suture slightly or up to almost a fifth shorter than pronotum. Membranous wings entire. Protarsomeres 1-4 in both sexes twice as wide as long. Mesotibia slightly dilated, about five to six times as long as wide. Distal antennomeres discernibly transverse. Laterotergite 9 (fig. 21) with a small, apico-dorsal tooth. Male sternite 8 (fig. 20) with a triangular emargination in the apical fourth having the proximal end rather rounded, but without lateral impressions and elevated midline. Lobes of the aedeagus (figs 13-15) slightly asymmetrical and somewhat bent to the right in dorsal view. Apical lobes short and stubby, strongly bent ventrally, each bearing a small, ventro-basal, triangular tooth and a long, dorsally curved apical spine, their ventral margins rather obtuse. Basal two-thirds of the apical lobes asymmetrically convex, afterwards strongly narrowed and parallel toward the apex in dorsal view. Outer margins of the apical lobes strongly convex and evenly narrowed toward the apex in ventral view, their inner ventral margins each bearing a row of about five short setae. Dorsal lobe slender at the base, strongly bent ventrally, claviform dilated distally and deeply divided ventrally into two lateral halves, each bearing an acute, apical tooth which is somewhat protruding from the ventral margins of the apical lobes. Phallobase without lateral setae, somewhat dilated distally and afterwards strongly narrowed toward the apical lobes. Spermatheca (fig. 37) with members somewhat bent and strongly triangular.

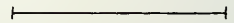
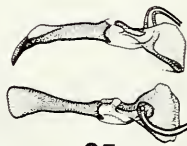
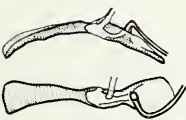
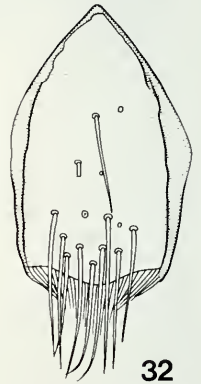
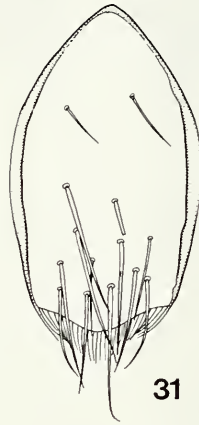
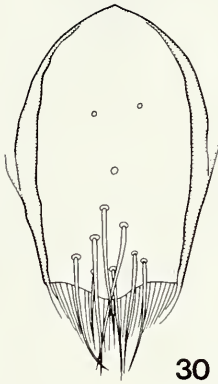
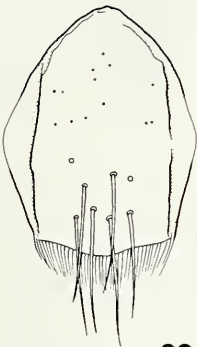
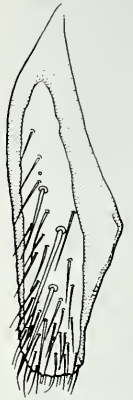
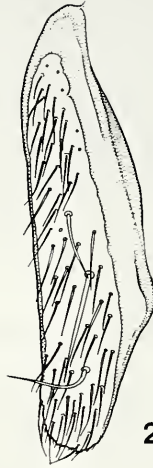
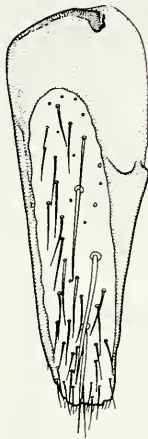
Ratios. HLW 1.05-1.12; PLW 1.19-1.26; HPW 1.09-1.17; HPL 0.97-1.02; PSL 1.05-1.18; PLL 0.83-0.94; ELW 1.06-1.25; ET 0.46-0.57; MT 5.0-5.8; A 2.3, 1.6, 1.3, 1.1, 1.1, 1.0, 0.9, 0.9, 0.8, 0.8, 1.5; T 2.0; V (♀) 5.3.

Distribution. *Scopaeus ampliatus* is recorded reliably only from North-West Italy (Liguria, Toscana), Elba, Corsica and Sardinia.



Figs 16-24

Sternite 8, ♂: 16) *Scopaeus sulcicollis*, Bosnia; 17) *S. argonauta*, Caucasus; 18) *S. ponticus* sp. n., holotype; 19) *S. rubidus*, France, Isère; 20) *S. ampliatus*, Italy, Elba. - Laterotergite 9, ♀: 21) *S. ampliatus*, paratype, Italy, Genova; 22) *S. argonauta*, Caucasus; 23) *S. ponticus* sp. n., paratype; 24) *S. rubidus*, Spain, Segovia. Scale bars: a = 0,1 mm (Figs 16-20); b = 0,1 mm (Figs 21-24).



Comments. *Scopaeus ampliatus* and *S. rubidus* share a similar shape of the dorsal lobe of the aedeagus, which is conspicuously dilated toward the apex, and appear related closely. Both species occur sympatrically in Tuscany, Liguria and Sardinia.

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REFERENCES

- ABOT, G. 1928. Catalogus des Coléoptères observés dans le département de Maine-et-Loire. Paris, 386 pp.
- ALLEN, A. A. 1968. Notes on some British Staphylinidae (Col.). 1. The genus *Scopaeus* Er. with the addition of *S. laevigatus* Gyll. to our list. *Entomologist's monthly magazine* 104: 198-207.
- BERNHAEUER, M. & SCHUBERT, K. 1910: Staphylinidae 1. - In: JUNK W. & SCHENKLING, S. (eds): Coleopterorum Catalogus 19. Berlin, 86 pp.
- BINAGHI, G. 1935. Studio sul genere *Scopaeus* Erich. (Coleopt.: Staphylin.). *Memorie della Società Entomologica Italiana* 14: 84-115.
- BOHAC, J. 1985. Review of the subfamily Paederinae (Coleoptera, Staphylinidae) in Czechoslovakia. Part II. *Acta entomologica bohemoslovaca* 82: 431-467.
- BOHAC, J. 1993. Staphylinidae. - In: JELINEK, J. 1993: Check-list of Czechoslovak Insects 4 (Coleoptera). *Folia Heyrovskyana, Suppl.* 1: 39-62.
- COIFFAIT, H. 1960. Démembrement du genre *Scopaeus* et description de 4 espèces nouvelles (Coleopt.: Staphylinidae). *Revue française d'Entomologie* 27: 283-290.
- COIFFAIT, H. 1968. *Scopaeus* nouveaux ou mal connus de la région paléarctique occidentale. *Bulletin de la Société d'Histoire naturelle de Toulouse* 104: 405-426.
- COIFFAIT, H. 1984. Coléoptères Staphylinides de la région paléarctique occidentale V: Sous-famille Paederinae Tribu Paederini 2. Sous-famille Euaesthetinae. *Publications de la Nouvelle Revue d'Entomologie* VIII, 424 pp.

FIGS 25-37

Valve, ♀: 25) *Scopaeus argonauta*, Caucasus; 26) *S. ponticus* sp. n., paratype; 27) *S. rubidus*, Spain, Segovia; 28) *S. ampliatus*, paratype, Italy, Genova. - Tergite 10, ♀: 29) *Scopaeus argonauta*, Caucasus; 30) *S. ponticus* sp. n., paratype; 31) *S. rubidus*, Spain, Segovia; 32) *S. ampliatus*, paratype, Italy, Genova. - Spermatheca: 33) *S. sulcicollis*, Bosnia; 34) *Scopaeus argonauta*, Caucasus; 35) *S. ponticus* sp. n., paratype; 36) *S. rubidus*, Spain, Segovia; 37) *S. ampliatus*, paratype, Italy, Genova. Scale bar = 0,1 mm.

- EDMONDS, T. H. 1931. The British species of the genus *Scopaeus* Er. (Coleoptera, Staphylinidae). *Entomologist's Monthly Magazine* 67: 272-275.
- EDMONDS, T. H. 1932. Some further notes on the genus *Scopaeus* Er. (Coleoptera, Staphylinidae) and an addition to the British list. *Entomologist's Monthly Magazine* 68: 206-209.
- FAUVEL, A. 1871. Décades Synonymiques. *L'Abeille* 7: 136.
- FAUVEL, A. 1872. Fauna gallo-rhénane 1. *Bulletin de la Société Linnéenne de Normandie* 2 (7): 8-132.
- FOWLER, W. W. 1888. The Coleoptera of the British Islands. A Descriptive Account of the Families, Genera and Species Indigenous to Great Britain and Ireland, with Notes as to Localities, Habitats, etc., Vol. II. *London*. 444 pp., pls 37-70.
- FRISCH, J. 1994. Neue Arten der Gattung *Scopaeus* Erichson aus Griechenland, Anatolien und dem Iran (Coleoptera, Staphylinidae, Paederinae). 1. Beitrag zur Kenntnis der Gattung *Scopaeus* Erichson. *Coleoptera* 2: 1-46.
- FRISCH, J. 1996. Revision westmediterraner *Scopaeus* - Arten (Coleoptera, Staphylinidae: Paederinae) und Beschreibung einer neuen Art aus Südspanien und Marokko. 2. Beitrag zur Kenntnis der Gattung *Scopaeus* Erichson. *Revue suisse de Zoologie* 103: 301-318.
- FRISCH, J. 1997. A revision of some West Palaearctic species of *Scopaeus* Erichson (Coleoptera, Staphylinidae, Paederinae). *Revue suisse de Zoologie* 104: 523-557.
- FRISCH, J. 1998. A revision of some West Palaearctic species of *Scopaeus* Erichson (Coleoptera, Staphylinidae, Paederinae). *Revue suisse de Zoologie* 105: 89-124.
- GANGLBAUER, L. 1895. Die Käfer von Mitteleuropa 2: Familienreihe Staphylinoidea. 1. Theil: Staphylinidae, Pselaphidae. *Wien*, 880 pp.
- GUSAROV, V. 1992. New and little known Palaearctic Staphylinids (Coleoptera, Staphylinidae). *Entomologicheskoe Obozrenie* 71 (4): 775-788, 951.
- HEYDEN, L. v., REITTER, E. & WEISE, J. 1891. Catalogus Coleopterorum Europae, Caucasi et Armeniae rossicae. *Berlin, Mödling, Caen*, 420 pp.
- HEYDEN, L. v., REITTER, E. & WEISE, J. 1906. Catalogus Coleopterorum Europae, Caucasi et Armeniae rossicae. *Berlin, Paskau, Caen*, 774 pp.
- HORION, A. 1965. Faunistik der mitteleuropäischen Käfer X: Staphylinidae 2. Teil: Paederinae bis Staphylininae: *Überlingen*, 335 pp.
- HORN, W., KAHLE, I., FRIESE, G. & GAEDICKE, R. 1990. Collectiones entomologicae. Ein Kompendium über den Verbleib entomologischer Sammlungen der Welt bis 1960. *Akademie der Landwirtschaftswissenschaften der Deutschen Demokratischen Republik, Berlin*, part 1, 220 pp., part 2, 573 pp.
- KLIMENT, J. 1899. Cesti brouci. Dilo o broucích Cech, Moravy a Slezska. *Nem. Brod*, 811 pp., 46 + 4 pl.
- KRAATZ, G. 1856-1858. Naturgeschichte der Insecten Deutschlands 2, Staphylinii. *Berlin*, 1080 pp. 1-376: 1856, 377-768: 1857a, 169-1080: 1857b.
- LASZLO, T. 1983. Coleoptera 2: Staphylinidae 5. *Fauna Hungariae* 155, 69 pp.
- LOHSE, G. A. 1964. Staphylinidae 1 (Micropeplinae bis Tachyporinae). In: FREUDE, H., HARDE, K. W. & LOHSE, G. A. 1964: Die Käfer Mitteleuropas 4. *Krefeld*, 264 pp.
- MULSANT, E. & REY, C. 1854. Essai spécifique sur les *Scopaeus* des environs de Lyon. *Annales de la Société Linnéenne de Lyon* 2: 161-190.
- MULSANT, E. & REY, C. 1855. Essai spécifique sur les *Scopaeus* des environs de Lyon. *Opuscules Entomologiques* 6: 49-79.
- NEUMANN, K. 1907. Einiges über Staphylinen (Col.). Die Typen und Originale aus der Sammlung des Pfarrers D. Scriba. *Deutsche Entomologische Zeitschrift* 1907: 327-330.
- NEWBERRY, E. A. 1914. *Scopaeus rubidus* of British collections: synonymical note. *Entomologist's Monthly Magazine* 50: 91-92.
- REDTENBACHER, L. 1874. Fauna Austriaca. Die Käfer. 3. edition. *Wien*. 564 pp.

- REITTER, E. 1909. Fauna Germanica. Die Käfer des Deutschen Reiches 2. *Stuttgart*, 392 pp., 80 plates.
- SAINTE-CLAIRE DEVILLE, J. 1907. Faune des Coléoptères du bassin de la Seine 2: Staphylinoidea. *Paris*, 169 pp.
- SCHEERPELTZ, O. 1925. Staphylinidae. In: WINKLER, A. (ed.) 1924-1932: *Catalogus Coleopterorum regionis palearcticae*. *Wien*, 1698 pp.
- SCHEERPELTZ, O. 1964. Staphyliniden von der Insel Kreta (Coleoptera). *Annales Historico-naturales Musei Nationalis Hungarici* 56, *Pars Zoologica*: 296-308.
- SCRIBA, W. 1868. Neue europäische Staphylinen. *Berliner Entomologische Zeitschrift* 12: 153-160.
- STEPHENS, J. F. 1832. *Illustrations of British Entomology, a synopsis of indigenous insects containing their generic and specific distinctions*. Mandibulata, 5. *London*, 240 pp.
- UHLIG, M. 1989. Zur Morphologie der weiblichen Terminalia einiger Staphylinidenarten (Coleoptera). *Verhandlungen des 11. SIEEC Gotha* 1986: 227-237.